**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

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| Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emission Standards into Procurement Policies. | ) | R.06-04-009 (Filed April 13, 2006) |

# COMMENTS OF CALPINE CORPORATION ON ALLOWANCE ALLOCATION ISSUES


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**COMMENTS OF CALPINE CORPORATION ON ALLOWANCE ALLOCATION ISSUES**

Pursuant to the October 15, 2007 ruling of Administrative Law Judges TerKeurst and Lakritz ("October 15 ALJ Ruling"), Calpine Corporation ("Calpine") submits these comments on the allocation of greenhouse gas ("GHG") emission allowances. As the final report of the Market Advisory Committee ("MAC") notes, how emission allowances are allocated "will affect how the economic impact of a cap-and-trade system is distribut[ed] among regulated entities, consumers, and other parties."[1] How different sectors of the energy industry are economically affected by the allocation of emission allowances will be critical to the ultimate success of Assembly Bill ("AB") 32. As discussed below, allocating allowances based on an output-based benchmark that is regularly updated will provide important incentives for investment in low-GHG technologies and fuels, reduce the potential for windfall profits that would more likely occur if a "grandfathering" approach is adopted, and help mitigate the costs associated with transitioning to a cap-and-trade system.

[1] Market Advisory Committee, "Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California" ("MAC Report"), June 30, 2007 at 55.

## 3.1 EVALUATION CRITERIA[2]

**Q1. Please comment on each of the criteria listed by the MAC. Are these criteria consistent with AB 32? Should other criteria be added, such as criteria specific to the electricity and/or natural gas sectors? In making trade-offs among the criteria, which criteria should receive the most weight and which the least weight?**

The MAC Report identifies several key criteria for designing and evaluating a cap-and-trade system. Calpine supports the fundamental principals underlying these criteria and believes they are important factors to consider as part of the overall implementation of AB 32. However, as discussed below, many of the criteria listed in the MAC Report - while important factors for consideration - are not directly relevant to the *allocation* of emission allowances for the electricity sector.

Given the effect that the allocation of emission allowances will have on the ultimate success of AB 32, the allowance allocation methodology must:

- recognize and account for recent investment in low-GHG technologies and fuel, and encourage continued investment in such technologies;
- ensure liquidity in the emissions allowance market;
- avoid interference with the operation of an open, liquid, and competitive wholesale electricity market;
- not threaten grid reliability;
- distribute allowances directly to the entities that are regulated under the program; and
- not discriminate between in-state and out-of-state resources.

The above factors are integral to achieving the emissions reduction goals set out in AB 32 and consideration of these factors should inform the decision in this proceeding.

[2] Headings and heading numbers correspond to those in the October 15 ALJ Ruling.

### a. Reduces the cost of the program to consumers, especially low-income consumers

AB 32 represents a fundamental shift in California's energy policy that will significantly change the types of generation operated in the State, as well as the types of resources used to serve customers. The net effect of this shift is that, at least initially, it should be expected that, in meeting the goals of AB 32, retail electric rates will necessarily increase as GHG reduction measures are implemented (and associated costs incurred). Over the longer term, however, the costs associated with reducing emissions should decrease as new, more efficient, technologies become available. Initial cost increases should also serve as an incentive for increased energy efficiency and demand reduction, which should further mitigate costs to consumers.

Notwithstanding the above, Calpine agrees that it may be appropriate to adopt measures that will mitigate rate impacts for low-income consumers. These measures, however, should not be part of the adopted allowance allocation scheme. Rather, mitigating rate impacts on low-income consumers can, and should, be addressed through other regulatory ratemaking policies and is not a criteria for determining allocation methodologies.

### b. Avoids windfall profits where such profits could occur

Concerns regarding windfall profits must be balanced against potential undue economic hardship that could be faced by entities subject to AB 32 compliance requirements. Nevertheless, Calpine supports an allowance allocation method that will not provide windfall profits to any entity, particularly high-emitting resources. As discussed below, Calpine's proposed allowance allocation methodology should reduce the likelihood of windfall profits.[3]

[3] *See* Response to Q23(g).

**c. Promotes investment in low-GHG technologies and fuel (including energy efficiency)**

Calpine strongly supports an allowance allocation scheme that rewards "early actors" who have invested in low-GHG technologies and fuel. Such early actors have already helped to reduce California's GHG footprint and recognizing their efforts will further encourage future investment in such technologies. By the same token, the allowance allocation scheme should not penalize entities for taking early action to reduce GHG emissions. Failing to reward early actors – or worse yet, penalizing them for doing so – will send the wrong message to the market and discourage innovation going forward.

**d. Advances the state's broader environmental goals by ensuring that environmental benefits accrue to overburdened communities**

Advancing the State's broader environmental goals is an important consideration in the overall implementation of AB 32. It is not, however, a goal that should be addressed directly through allowance allocation. Indeed, because climate change affects all communities (locally and globally), mandated reductions in GHG emissions will necessarily benefit all socio-economic classes and communities, particularly communities where high polluting resources are currently located. In other words, once AB 32 is fully implemented, it will be unlikely that high polluting resources will be able to operate as they currently do and still meet AB 32 requirements. Thus, communities where high polluting resources are located should see environmental benefits. Moreover, unlike emissions trading programs for traditional criteria air pollutants, GHG allowance trading does not have the potential to create local "hotspots."

**e. Mitigates economic dislocation caused by competition from firms in uncapped jurisdictions**

Calpine believes that it would be proper for a GHG emissions trading system to mitigate, to the extent possible, economic dislocation caused by competition from firms in uncapped jurisdictions. However, this is not an allowance allocation issue.

**f. Avoids perverse incentives that discourage or penalize investments in low-GHG technologies and fuels (including energy efficiency)**

Calpine believes that encouraging investment in low-GHG technologies and fuels is an important criteria to be considered in formulating an emissions allowance allocation program for the electricity sector. As noted below, Calpine believes that it is critical to the success of AB 32 that entities (including early actors) which invest in low-GHG technologies and fuels be rewarded for such investment through the allowance allocation system.[4]

**g. Provides transition assistance to displaced workers**

To the extent that compliance with AB 32 displaces workers in certain industries, Calpine supports assistance to these workers through targeted policies and programs. Such programs, however, should not affect nor be included in the emissions allowance allocation system being considered in this proceeding.

**h. Helps to ensure market liquidity**

Ensuring liquidity in the emissions allowance market will be critical to the success of AB 32. Liquidity can be impacted by many factors, including the number of entities who are allocated emissions allowances. Thus, it is important that the method for allocating emissions allowances does not result in allowances being concentrated in the hands of a limited number of entities.

## 3.2 BASIC OPTIONS

As Calpine discussed in previous comments filed in this proceeding, it has not taken a position as to whether a load-based or deliverer/first seller approach is superior and should be adopted. Both approaches have strengths and weaknesses, and whether one approach or the other will better ensure a reduction in GHG emissions will depend, for the most part, on

[4] *See* Response to Q10.

implementation details. However, Calpine firmly believes that it is critical that the allocation of emissions allowances be linked to the entities that are regulated under the GHG program, and reward investment in low-GHG technologies and fuels.

**Q2. Broadly speaking, should emission allowances be auctioned or allocated administratively, or some combination?**

Auctions and administrative allocations each have positive and negative aspects. Calpine, however, believes that a regularly updated, output-based allocation methodology is the most cost efficient manner in which to achieve emission reductions in terms of both ratepayer impacts and economic hardship on entities regulated under the program. Furthermore, although auctions may appear to be an efficient and non-discriminatory way to distribute allowances based on a power plant's actual environmental performance, an allowance auction may result in much greater uncertainty and market volatility since, to date, it is an untried and unproven concept, especially with respect to $CO_2$ emissions where there are few if any available control technologies.

Given that a GHG cap-and-trade system will impose significant compliance costs on regulated entities in the early years of the program, Calpine recommends administratively allocating allowances rather than auctioning them, regardless of whether a load-based or deliverer/first seller approach is adopted. An administrative allocation scheme should help mitigate compliance costs during the initial transition period. Calpine supports allocating allowances at no cost to entities subject to the program using an output-based allocation methodology that is regularly updated. If such an approach is not adopted, Calpine supports the hybrid auction approach discussed below.[5] By initially allocating a portion of allowances for free and a portion through an auction system, the financial impact on entities regulated under the

[5] *See* Response to Q3.

program will be lessened under a hybrid auction approach, although not to the same extent as would occur using a purely administrative allocation methodology.

**Q3. If you recommend partial auctioning, what proportion should be auctioned? Should the percentage of auctioning change over time? If so, what factors should be used to design the transition toward more auctioning?**

As discussed above, Calpine believes an administrative allocation of allowances in the early years is more appropriate than an pure auction approach. If this approach is not adopted, Calpine would support a phased-in auction process, whereby most allowances are administratively allocated in the early years of the program, with a gradual transition to a mostly auction process. Calpine believes that a gradual transition to an auction system is necessary to allow entities regulated under the program to adopt and implement emission reduction measures with the least disruption to the market. Additionally, considering the overall lack of experience that regulators have with large-scale auctions for emission compliance purposes, it is more prudent to start small and gradually increase the volume of allowances auctioned. Specifically, allowances should be administratively allocated at the outset of the program and then the program gradually move towards an 100% auction system. The Electric Utility Cap and Trade Act of 2007, S. 317, proposed by Senator Diane Feinstein provides a reasonable schedule for increasing the proportion of allowances auctioned over time, culminating in 100% in 2036.

**Q4. How should new market entrants, such as energy service providers, community choice aggregators, or (deliverer/first seller system only) new importers, obtain emission allowances, i.e., through auctioning, administrative allocation, or some combination?**

Under either a load-based or deliverer/first seller approach, allowances should be set aside (*i.e.*, not allocated up-front) for new entrants. These allowances should be distributed at no cost to new entrants (consistent with Calpine's position that 100% of the allowances be administratively allocated at the outset of the program) from a set-aside pool using the same allocation method used for existing entities (*i.e.*, output-based). A new entrant would be

eligible to receive allowances from the new entrants set aside pool for a period of time until the new entrant establishes an operating history that will allow it to become part of the existing entity pool. To be successful, such an approach would require that the output-based benchmark be regularly updated. This approach has been successfully implemented by states in the eastern United States which operate a nitrogen oxides cap-and-trade program (*e.g.*, Massachusetts, New York, and New Jersey). To the extent allowances from the new entrants set aside pool are not used, the allowances should be redistributed to the existing entrant pool.

### 3.3 AUCTIONING OF EMISSION ALLOWANCES—GENERAL QUESTIONS

Entities regulated under AB 32 will face considerable compliance costs during the initial transition period. Thus, during the early years of the program, it is important that allowances be freely allocated to offset these costs. Moreover, it is important that allowances be allocated at no cost on an updating, output basis to encourage generation efficiency and provide incentives for investment in low-GHG technologies and fuel. A gradual move toward an auction process as the primary mode of allowance distribution in later years of the program will allow for the orderly planning for, and transition to, a cap-and-trade system – which should minimize price and supply disruptions. For these reasons, Calpine opposes auctioning a high proportion of allowances in the early years of the cap-and-trade program.

In addition, it should be noted that, to date, no existing emissions trading system has auctioned more than a small percentage of allowances. Given the uncertainty of compliance (*i.e.*, emissions reduction) costs, and thus allowance prices, auctioning a high percentage of allowances initially could cause an undue economic burden for entities regulated under the program and create volatility in carbon and energy prices.

**Q5. What are the important policy considerations in the design of an auction?**

As discussed above, Calpine does not support auctioning 100% of the emissions allowances in the early stages of the program. However, should the Commission adopt an auction approach (in any form), the following principles must be incorporated:

- market liquidity should be maximized;
- the exercise of market power by individual entities or groups of entities should be prevented;
- auctions should be held periodically and regularly;
- a sufficient quantity of allowances must be available to maintain system reliability; and
- auctions should be transparent and provide price discovery.

Incorporating the above principles will help ensure that an allowance auction system will achieve the desired emissions reductions with the least amount of economic disruption to entities regulated under the program.

**Q6. How often should emission allowances be auctioned? How does the timing and frequency of auctions relate to the determination of a mandatory compliance period, if at all?**

Calpine does not have a specific recommendation on the frequency of auctions at this time but does note that the frequency of auctions should take into account the relative proportion of allowances to be auctioned, the frequency of entity "true-up" (*i.e.*, the retirement of allowances to cover emissions), and the liquidity of the secondary allowance market. Auctions can occur less often if the proportion of auctioned allowances is small relative to the total quantity of allowances that are available, entity true-up is less frequent, and there is a sufficient quantity of allowances available in the secondary market. As a general rule, auctions should be held far enough in advance of the compliance period to promote responsible business planning

on the part of entities regulated under the program but not so far in advance that the carrying cost of the allowances becomes an economic burden on the entities or ratepayers.

**Q7. How should market power concerns be addressed in auction design? If emission allowances are auctioned, how would the administrators of such a program ensure that all market participants are participating in the program and acting in good faith?**

Calpine does not have specific recommendations for addressing market power concerns in the auction design, but, as a general principle, supports limiting market power as an objective. In addressing this issue, however, the Commission should recognize that market power, as it potentially exists in the day-to-day functioning of a cap-and-trade system, would be a more significant concern under a load-based system as opposed to a deliverer/first seller approach because of the smaller number of entities that would be regulated under a load-based system.

Regardless of the point of regulation, however, the entity managing the auction process must be the State or a neutral third-party without any stake in the allowance market. The use of a neutral third-party will help ensure market liquidity and equitable treatment for all entities regulated under the cap-and-trade system. In addition, the entity managing the auction process could also monitor market power and the auction rules could further provide for a response protocol to ensure electric system reliability.[6]

**Q8. What criteria should be used to designate the types of expenditures that could be made with auction revenues (including use to reduce end user rates), and the distribution of money within those categories?**

Calpine is not submitting a specific response on this issue at this time but, as a general matter, believes all auction revenues should be used for purposes related to the implementation of AB 32.

[6] Calpine reserves the right to offer additional comments on this issue in its reply comments.

**Q9. What type of administrative structure should be used for the auction? Should the auction be run by the State or some other independent entity, such as the nonprofit organization being established by the Regional Greenhouse Gas Initiative?**

To the extent an auction approach is adopted, it is critical to the integrity and success of the process that it be administered by the State or an independent third-party with no stake in the allowance market.

## 3.4. ELECTRICITY SECTOR

### 3.4.1. ADMINISTRATIVE ALLOCATION OF EMISSION ALLOWANCES

**Q10. If some or all allowances are allocated administratively, which of the above method or methods should be used for the initial allocations? If you prefer an option other than one of those listed above, describe your preferred method in detail. In addition to your recommendation, comment on the pros and cons of <u>each</u> method listed above, especially regarding the impact on market performance, prices, costs to customers, distributional consequences, and effect on new entrants.**

Regardless of the point of regulation (*i.e.*, load based or deliverer/first seller), Calpine supports allocating allowances using an output-based benchmark that is regularly updated. This allocation method would set, and regularly update, a benchmark (in lbs/MWh) based on the emissions goal of the sector. In practice, this means that allowances would be allocated based on an entity's specific production or sales (*e.g.*, MWh generated or supplied) multiplied by the benchmark. Both the benchmark and the amount of allowances allocated would be regularly updated to reflect current market conditions, achieve GHG emissions reduction goals, and provide incentives for investments in low-GHG technologies and fuels.

A regularly updated output-based benchmark has the following benefits:

- it rewards early actors who have already invested in low emission technologies and practices because the quantity of allowances an entity receives is predicated on the entity's output, rather than emissions;
- it does not create perverse incentives to extend the life of dirty, inefficient generators or contracts with these generators;

- it does not competitively disadvantage new entrants and/or small retail providers, as it would provide equal access to allowances for these entities; and
- it provides the opportunity to include non-fossil fuel generators in the allocation process; thereby further promoting non-emitting technologies.

In contrast, a "grandfathering" approach would penalize efficient fossil fuel generation as well as entities that have already invested in low-GHG technologies and fuels because such entities would be allocated fewer allowances than entities that have not undertaken such investments. In addition, grandfathering would encourage entities to prolong the life of high-polluting resources or contracts with such resources in order to maintain their allowance allocation.

A grandfathering approach would also not provide any real incentive for efficiency improvements or investments in cleaner, more efficient, generating technologies because an entity would receive the same allowance allocation regardless of its future reductions in emissions or fuel consumed. This sends the wrong signal to the market and, in effect, provides incentives to entities with high-emitting resources to continue operating without regard to the efficiency of their operations. This approach would penalize new, likely more efficient, market entrants by requiring them to purchase allowances from the market. Furthermore, as Calpine understands the grandfathering approach, entities that receive allowances at the start of the program, but then subsequently retire or mothball a plant would nevertheless continue to receive allowances for that plant even though the plant is no longer operating.

An allowance allocation system aimed solely at compensating higher $CO_2$ emitting facilities neglects the contribution of entities that have already invested in generating fleets with lower emissions prior to the imposition of the cap, and it could deter the incentive to invest in low-emitting technologies in the future. It also fails to recognize that, in the absence of these investments, California would be facing a far greater hurdle in reducing current emissions.

To achieve substantial $CO_2$ reductions, an allowance allocation system should be designed to recognize and reward existing, clean, efficient, low and non-emitting technologies, as well as drive innovation and the deployment of new, highly efficient generating technologies. An updating output-based allocation approach would achieve this goal. By providing a financial incentive to increase output while decreasing emissions, this approach would drive entities to become more efficient (*i.e.*, produce a greater amount of electricity per unit of fuel).

An updating output-based allocation approach will also encourage the development of new, innovative technologies by providing a mechanism for new power projects to be integrated into the cap-and-trade program on an equal footing with existing resources. A new source, once it has a sufficient operating history, will be allocated allowances based on the quantity of output that it generates, as would be the case for existing facilities in the program. Less economically and thermally efficient power plants, will be encouraged to improve their efficiency (or retire). An output-based allocation system also allows non-emitting facilities, such as renewable resources, to receive allowances.

For all of the above reasons, an updating output-based allocation approach is a superior approach as California transitions to a cleaner, more efficient electricity generation fleet.

**Q11. Should the method for allocating emission allowances remain consistent from one year to the next, or should it change as the program is implemented?**

Since entities regulated under the program must have certainty with respect to how allowances are allocated, the basic method for allocating allowances (*i.e.*, a regularly updated output-based approach) should remain the same from year to year, notwithstanding that the actual amount of allowances allocated may decline over time. As discussed below, actual allocations should be periodically updated to reflect changing market conditions and

participants.[7] This would include updating both the "benchmark" for the sector and entity specific allocations. Updating allocations in this way should better capture, *and reward*, increased use of low-GHG emitting technologies, integrating new sources into the existing source allocation pool. This approach would also provide market signals for entities to invest in cleaner technologies. To maximize this benefit, the schedule for updating allowance allocations should be known well in advance to allow entities to properly plan for compliance.

**Q12. If new market entrants receive emission allowance allocations, how would the proper level of allocations be determined for them?**

Allowances should be administratively allocated to new market entrants on the same basis as existing market participants. Specifically, Calpine recommends that allowances be allocated to new market entrants on a lbs/MWh basis using the entity's projected output (generation or load-served). An allowance pool (*i.e.*, reserve) should be set-aside for new entrants with any unallocated allowances remaining in the pool at the end of a year made available to other entities.

With respect to the closure of facilities or termination of contracts (essentially the opposite of new entry), a rule that requires revocation of allowances upon the closure of a facility (under a deliverer/first seller approach) or termination of a contract (under a load-based approach) *in the current allocation period* would provide a disincentive for retiring dirty, inefficient generating facilities. For this reason, Calpine recommends that entities be allowed to retain allowances upon facility closure or contract termination until the next update of the allowance allocation.

[7] *See* Response to Q13.

**Q13. If emission allowances are allocated based on load/sales, population, or other factors that change over time, how often should the allowance allocations be updated?**

Under a regularly updating output based approach, the benchmark is periodically recalculated to include more recent information on output and/or sales and emissions rates. Allowances would then be redistributed per the new benchmark. Among its benefits, an updating process accounts for: (1) the closing of older, less-efficient power plants; (2) the start-up of new, more efficient power plants; (3) efficiency upgrades at existing plants; and (4) fluctuations in yearly generation capacity. Updating also encourages efficiency improvements and new low-carbon energy resources.

Calpine believes updating should occur every year.[8]

**Q14. If emission allowances are allocated based on historical emissions ("grandfathering") or benchmarking, what base year(s) should be used as the basis for those allocations?**

As discussed above, emission allowances should *not* be allocated based on historical emission levels.[9] This "grandfathering" approach is inconsistent with an important goal of AB 32 - rewarding entities that have already invested in low-GHG technologies and fuels – and, at least under a deliverer/first seller approach, would increase the likelihood of high polluting resources receiving windfall profits. Calpine supports a "benchmarking" approach (specifically, an output based methodology) that would set the benchmark by looking at future emissions reduction goals and not require a look back at historical emissions. The benchmark does depend, in part, on a power plant's previous output (*i.e.*, MWh). This portion of the benchmark should be updated based on the average of the energy output for the three previous years.[10]

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[8] *See* Response to Q19.

[9] *See* Response to Q10.

[10] *See* Respone to Q19.

**Q15. If emission allowances are allocated based initially on historical emissions ("grandfathering"), should the importance of historical emissions in the calculation of allowances be reduced in subsequent years as providers respond to the need to reduce GHGs? If so, how should this be accomplished? By 2020, should all allocations be independent of pre-2012 historical emissions?**

Calpine opposes a grandfathering approach to allocating allowances. As noted above, a grandfathering allocation approach would penalize entities that utilize low-GHG technologies and fuels. Under a grandfathering approach, allowances are distributed by selecting a point in time (the "baseline") and a basis for measuring a generating facility's contribution to the baseline (*i.e.*, emissions, fuel use, or electric output). Each generator's contribution to the baseline is then calculated and all future allowances are allocated based on each generator's contribution to the baseline at that time. While this approach may provide entities with some certainty – they know how many allowances they will always receive - it does not account for production changes. For instance, if an entity closes a power plant, it still receives the same number of allowances as if the plant was still operating, and, by the same token, if an entity opens a new plant or increases production at an existing plant, it will not receive any additional allowances. This highlights an additional benefit of an "updating" approach to allocating allowances. By having an already established process by which to adjust the benchmark, administrators have an easy tool to continue to scale down emissions to meet emissions reduction goals. This improves the administrative ease of the program.

With regard to whether or not pre-2012 historical emissions should be independent of 2020 allocations, the answer is Yes. A regular updating of allowances which should result in 2020 allocations being completely independent of pre-2012 historical emissions.

**Q16. Should a two-track system be created, with different emission allowances for deliverers/first sellers or retail providers with legacy coal-fueled power plants or legacy coal contracts? What are the factors and trade-offs in making this decision? How would the two tracks be determined, e.g., using an historical system emissions factor as the cut-off? How should the allocations differ between the tracks, both initially and over time? What would be the market impact and cost consequences to consumers if a two-track method were used?**

No. A two-track system with different emission allowances for deliverers/first sellers or retail providers with legacy coal-fueled power plants would unfairly advantage coal generators, perpetuate investment in carbon intensive resources, and reduce incentives for GHG emission reductions from coal-fueled generators. Administrative allocation methodologies should be fuel "neutral" so as to not predetermine technological solutions for achieving emission reductions.

Furthermore, an important goal of AB 32 should be to incentivize entities to make choices and take actions that will minimize or reduce GHG emissions. For this to happen, carbon price signals must be seen by generators, retail providers, and ultimately, consumers. Approaches, such as a two-track system, that would dilute the carbon price signal to consumers undermine this goal.

**Q17. If emission allowances are allocated administratively to retail providers, should other adjustments be made to reflect a retail provider's unique circumstances? Comment on the following examples, and add others as appropriate:**

**a. Climate zone weighting to account for higher energy use by customers in inclement climates.**

Under a load-based approach, allocating allowances to retail providers based on a regularly updated output-based benchmark would address this issue. This question is not relevant to a deliverer/first seller approach.

**b. Increased emission allowances if there is a greater-than-average proportion of economically disadvantaged customers in a retail provider's area.**

As discussed above, Calpine does not believe that rate mitigation measures should be part of an allowance allocation program.[11] Rather, mitigation of rate impacts on economically disadvantaged customers should be addressed through other State policies and programs.

**Q18. Should differing levels of regulatory mandates among retail providers (e.g., for renewable portfolio standards, energy efficiency investment, etc.) be taken into account in determining entity-specific emission allowance allocations going forward? For example, should emission allowance allocations be adjusted for retail providers with high historical investments in energy efficiency or renewables due to regulatory mandates? If those differential mandates persist in the future, should they continue to affect emission allowance allocations?**

No. Under a load-based approach, allocating allowances to retail providers based on a regularly updated output-based benchmark should reward retail providers that have already reduced emissions through increased procurement of renewable and clean resources, or invested in energy efficiency. By the same token, it is important that retail providers not be penalized for compliance with existing regulatory mandates, such as renewables portfolio standard requirements or energy efficiency investments. This question is not relevant to a deliverer/first seller approach.

**Q19. How often should the allowance allocation process occur? How far in advance of the compliance period?**

Under an output-based benchmark methodology, the allowance allocation process should occur every year based on the previous three years of output (MWh generated or supplied), with the amount of allowances allocated three years in advance. For example, in 2012 an allowance allocation for 2014 would occur based on the average output from 2009 to 2011. From a timing

[11] *See* Response to Q.1(a).

perspective, such a process should provide sufficient notice for entities regulated under the program to facilitate planning for necessary emission reduction measures.

**Q20. What are the distributional consequences of your recommended emission allowance allocation approach? For example, how would your method affect customers of retail providers with widely differing average emission rates? Or differing rates of population growth?**

Under an emissions cap-and-trade program, the emissions rate of all retail providers should, over time, decrease and converge. A regularly updated output-based benchmark methodology, whether under a load-based or a deliver/first seller approach, would provide important incentives for investment in low-emitting resources regardless of the number of customers since allowances would be allocated based on lbs/MWh. In addition, the use of an output-based allocation methodology would create strong price signals for those entities and areas most dependent on high-emitting technologies and fuel. As discussed above, Calpine believes that this is consistent with the goal of AB 32, and an appropriate outcome.[12]

### 3.4.2. EMISSION ALLOWANCES WITH A DELIVERER/FIRST SELLER POINT OF REGULATION

**Q21. Would a deliverer/first seller point of regulation necessitate auctioning of emission allowances to the deliverers/first sellers?**

A deliverer/first seller approach may necessitate some auctioning of allowances to address power imports by marketers through the California Independent System Operator ("CAISO") markets. However, for out-of-state resources owned by a load serving entity ("LSE"), or under contract to an in-state LSE, allowances may be allocated based on the contracted for power or on the percentage of ownership of the resource. Allowances should not, under any circumstances, be allocated in advance where the quantity of power imported or the importer is not known.

[12] *See* Response to Q.16.

**Q22. Are there interstate commerce concerns if auction proceeds are obtained from all deliverers/first sellers and spent solely for the benefit of California ratepayers? If there are legal considerations, include a detailed analysis and appropriate legal citations.**

Calpine is not submitting a response on this issue at this time but reserves the right to submit reply comments on this issue.

**Q23. If you believe 100% auctioning to deliverers/first sellers is not required, explain how emission allowances would be allocated to deliverers/first sellers. In doing so, answer the following:**

**a. How would the amount of emission allowances given to deliverers/first sellers be determined during any particular compliance period?**

Under Calpine's recommended approach (*i.e.*, a regularly updated output-based benchmark methodology), the total quantity of allowances would be set based on a pre-determined benchmark/cap for the electricity sector. Allowances would then be apportioned into two pools – one for native (*i.e.*, in-state) power and one for imported power - based on relative contribution to the State's total load. To account for weather deviations, it is reasonable to average the load over the previous three years.

For in-state generators, allowances from the native power pool would be allocated based on each generator's net electric output for the most recent three calendar years.

For imported power, the allowance pool would be further apportioned between known power (*i.e.*, power imported under an existing contract to a California retail provider and by owned assets) and power imported through CAISO markets. Allowances from the "known power pool" would be allocated to deliverers/first sellers based on the relative proportion of power imported. Allowances from the "CAISO import pool" would be auctioned to deliverers/first sellers, as there would be no way to allocate these allowances in advance, and allocation on a first-come, first-serve basis could disadvantage power imported later in the year.

**b. How would importers that are marketers be treated, e.g., would they receive emission allowance allocations or be required to purchase all their needed emission allowances through auctions? If allocated, using what method?**

*See* response to Q23(a).

**c. How would electric service providers be treated?**

To the extent that an energy service provider ("ESP") imports power from out-of-state and is considered the deliverer/first seller, allowances would be allocated for out-of-state resources under contract to the ESP based on the terms of the contract. Under this approach, ESPs would be required to purchase allowances (through auction or the secondary markets) for any imports through the CAISO markets for which the ESP is responsible.

**d. How would new deliverers/first sellers obtain emission allowances?**

For new in-state resources, allowances could be allocated from a set-aside pool based on projected output of the resources.[13] Similarly, allowances could be set-aside from the import pool[14] and allocated for new import contracts (or new assets) based on contract terms or ownership percentage. Alternatively, importers could be required to purchase allowances through auction or the secondary market.

**e. Would zero-carbon generators receive emission allowance allocations?**

First and foremost, it is important that the policies adopted for renewable and zero-emission resources under the State's existing RPS program and renewable energy credit trading program work synergistically with any GHG cap-and-trade program. For this reason, it is necessary to carefully review the emission allocation protocol for zero-emitting resources. As a general matter, under a regularly updated output-based benchmark approach, zero-carbon

[13] *See* Response to Q4.

[14] *See* Response to Q23(a).

generators should receive emission allowances as the allocation of allowances to such generators would create additional incentives for investment in renewable resources, as well as reduce the amount of allowances allocated to fossil-fueled generators. However, future decisions on this issue must be weighed against other incentives already provided by existing or future programs.

**f. What would be the impact on market performance, prices, and costs to customers of allocating emission allowances to deliverers/first sellers?**

Because the cost of allowances (whether a direct cost or opportunity cost) will be reflected in bid prices, both the auction approach and the administrative allocation approach should have the same impact on wholesale electricity prices and overall consumer prices. Having said this, for the reasons discussed above, *allocating* allowances based on a regularly updated output-based methodology should reduce the cost of allowances vis-à-vis an auction process.[15] For this reason, the allocation of allowances is likely to be less disruptive to energy markets than an auction approach.

**g. What would be the likelihood of windfall profits if some or all emission allowances are allocated to deliverers/first sellers?**

As discussed above, the likelihood of windfall profits will be reduced under a regularly updated output-based methodology because the quantity of allowances are regularly updated to account for changes in production and emissions – reducing the likelihood that any one entity is holding more allowances than needed to meet compliance obligations. The quantity of allowances allocated to high-emitting generators over time will be lower than under a "grandfathering" approach.[16] It is unlikely that windfall profits would be a concern under a regularly updated output-based approach. Concerns over windfall profits have arisen in part, due

[15] *See* Response to Q10.

[16] *See* Response to Q10.

to the experience in Phase 1 of the European Union Emission Trading Scheme ("EU-ETS"). In that market "windfall profit" concerns are primarily attributable to reliance on inaccurate data, the inflation of historical emissions, and an over-allocation of allowances in that market. California is already well ahead of the Phase One EU-ETS by having in place strong reporting protocols that strive for the accurate monitoring and reporting of emissions. This fact alone is protection against windfall profits.

**h. How could such a system prevent windfall profits?**

*See* response to Q23(g).

**Q24. With a deliverer/first seller point of regulation, should administrative allocations of emission allowances be made to retail providers for subsequent auctioning to deliverers/first sellers? If so, using what allocation method? Refer to your answers in Section 3.4.1., as appropriate.**

No. Retail providers should not, *under any circumstances*, be allocated allowances for subsequent auctioning to deliverers/first sellers. To the extent allowances are allocated, retail providers should be treated no differently than other entities subject to the cap-and-trade program. Specifically, allowances should be allocated to all entities who are regulated under the program, whether a generator, marketer, or retail provider.

Furthermore, under a deliverer/first seller approach, if retail providers are the only entities allocated allowances, they would control a disproportionately large portion of the allowance market relative to their power sales. Giving a retail provider control over a disproportionately large portion of the allowance market could reduce liquidity in the allowance market and, as a result, reduce the ability of the market to find the most cost effective means for meeting emission reduction goals. Liquidity and transparency are critical to an efficient market. Allocating allowances only to retail providers under a first seller approach is counter to this goal.

In addition, it is important to recognize that the method for allocating allowances can have significant competitive impacts. For instance, since some retail providers also own

generation, allocating allowances to them while requiring other entities to acquire allowances at auction would be patently unfair. Specifically, retail providers should not be the only entities that are allocated allowances given that they compete in the market with other generators and marketers. As noted above, liquidity and transferability will better ensure an efficient allowance market. Accordingly, because giving allowances to retail providers for subsequent auctioning to other deliverers/first sellers undermines liquidity and transferability, this approach should be rejected.

**Q25. If you recommend allocation of emission allowances to retail providers followed by an auction to deliverers/first sellers, how would such an auction be administered? What kinds of issues would such a system raise? What would be the impact on market performance, prices, and costs to customers?**

For the reasons discussed above, retail providers should not be allocated allowances for subsequent auctioning to deliverers/first sellers.[17] Such an approach is, in effect, an auction of allowances with the revenue distributed to retail providers. In contrast, a regularly updated output-based methodology for all entities regulated under the program should help mitigate the costs associated with transitioning to a cap-and-trade system, and "free-up" more resources for investment in low-GHG technologies and fuel. Furthermore, as discussed above, Calpine believes that other, more appropriate means, exist for addressing consumer rate impacts.[18]

[17] *See* Response to Q24.

[18] *See* Response to Q24.

## 3.5. NATURAL GAS SECTOR

**Q26. Answer each of the questions in Section 3.4.1 except Q16, but for the natural gas sector and with reference to natural gas distribution companies investor- or publicly-owned), interstate pipeline companies, or natural gas storage companies as appropriate. Explain if your answer differs among these types of natural gas entities. Explain any differences between your answers for the electricity sector and the natural gas sector.**

Calpine is not submitting specific responses to natural gas sector issues at this time but does believe that, in general, an output-based approach for the allocation of allowances to the gas sector is consistent with the State's overall policy goals under AB 32.

**Q27. Are there any other factors unique to the natural gas sector that have not been captured in the questions above? If so, describe the issues and your recommendations.**

*See* response to Q26.

## 3.6. OVERALL RECOMMENDATION

**Q28. Considering your responses above, summarize your primary recommendation for how the State should design a system whereby electricity and natural gas entities obtain emission allowances if a cap and trade system is adopted.**

Calpine supports a fuel neutral, regularly updated, output-based approach for the allocation of allowances for the electricity sector, regardless of whether a load-based or deliverer/first seller approach is adopted. Such an approach is consistent with the overall intent and policy goals of AB 32, provides important incentives for investment in low-GHG technologies and fuels, and better ensures that resources will be available to entities for such investment. As discussed above, Calpine can support a gradual, phased-in transition to

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auctioning. However, 100% auctioning of allowances in the early years of the program could cause undue economic hardship and divert resources that could otherwise be used to achieve GHG emission reductions.

Respectfully submitted,

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Dated: October 31, 2007

## CERTIFICATE OF SERVICE

I, Judy Pau, certify:

I am employed in the City and County of San Francisco, California, am over eighteen years of age and am not a party to the within entitled cause. My business address is 505 Montgomery Street, Suite 800, San Francisco, California 94111.

On October 31, 2007, I caused the following to be served:

**COMMENTS OF CALPINE CORPORATION ON ALLOWANCE ALLOCATION ISSUES**

via electronic mail to all parties on the service list R.06-04-009 who have provided the Commission with an electronic mail address and by First class mail on the parties listed as "Parties" and "State Service" on the attached service list who have not provided an electronic mail address.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on the date above at San Francisco, California.

_____/s/ Judy Pau_____

Judy Pau

cc: Commissioner Michael R. Peevey (via U.S. Mail and Email)
ALJ Charlotte TerKeurst (via U.S. Mail and Email)
ALJ Jonathan Lakritz (via U.S. Mail and Email)
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California Energy Commission Docket Office
Karen Griffin, California Energy Commission

**CALIFORNIA PUBLIC UTILITIES COMMISSION**
**Service Lists**

**Proceeding: R0604009 - CPUC - PG&E, SDG&E,**
**Filer: CPUC - PG&E, SDG&E, SOCALGAS, EDISON**
**List Name: LIST**
**Last changed: October 29, 2007**

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